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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/489,667B

DATE: 10/15/2001

TIME: 13:21:38

Input Set : A:\D2875.ST25.txt

Output Set: N:\CRF3\10152001\I489667B.raw

ENTERED

3 <110> APPLICANT: Donovan, Stephen  
 5 <120> TITLE OF INVENTION: Clostridial Toxin Derivatives and Methods for Treating Pain  
 7 <130> FILE REFERENCE: D-2875  
 9 <140> CURRENT APPLICATION NUMBER: US 09/489,667B  
 10 <141> CURRENT FILING DATE: 2000-01-19  
 12 <160> NUMBER OF SEQ ID NOS: 18  
 14 <170> SOFTWARE: PatentIn version 3.1  
 16 <210> SEQ ID NO: 1  
 17 <211> LENGTH: 11  
 18 <212> TYPE: PRT  
 19 <213> ORGANISM: Unknown  
 21 <220> FEATURE:  
 22 <223> OTHER INFORMATION: Description of Unknown Organism: This is a substance P and is  
 ve  
 23 ry well known in the art.  
 25 <220> FEATURE:  
 26 <221> NAME/KEY: MISC FEATURE  
 27 <222> LOCATION: (11)..~~(11)~~  
 28 <223> OTHER INFORMATION: Xaa at position 11 is Methionine Amide  
 31 <400> SEQUENCE: 1  
 W--> 33 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Xaa  
 34 1 5 10  
 37 <210> SEQ ID NO: 2  
 38 <211> LENGTH: 12  
 39 <212> TYPE: PRT  
 40 <213> ORGANISM: Unknown  
 42 <220> FEATURE:  
 43 <223> OTHER INFORMATION: Description of Unknown Organism: Precursor to substance P,  
 which  
 44 is very well known in the art.  
 46 <400> SEQUENCE: 2  
 48 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly  
 49 1 5 10  
 52 <210> SEQ ID NO: 3  
 53 <211> LENGTH: 13  
 54 <212> TYPE: PRT  
 55 <213> ORGANISM: Unknown  
 57 <220> FEATURE:  
 58 <223> OTHER INFORMATION: Description of Unknown Organism: This is a precursor to  
 substanc  
 59 e P and is very well known in the art.  
 61 <400> SEQUENCE: 3  
 63 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Lys  
 64 1 5 10  
 67 <210> SEQ ID NO: 4  
 68 <211> LENGTH: 14  
 69 <212> TYPE: PRT  
 70 <213> ORGANISM: Unknown

72 <220> FEATURE:

73 <223> OTHER INFORMATION: Description of Unknown Organism: This is a precursor to  
substanc

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74      e P and is very well known in the art.
76 <400> SEQUENCE: 4
78 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Lys Arg
79 1          5          10
82 <210> SEQ ID NO: 5
83 <211> LENGTH: 12
84 <212> TYPE: PRT
85 <213> ORGANISM: Artificial Sequence
87 <220> FEATURE:
88 <223> OTHER INFORMATION: Description of Artificial Sequence: This is a carboxy-ester
synt
89      hetic precursor to substance P.
91 <220> FEATURE:
92 <221> NAME/KEY: MISC_FEATURE
93 <222> LOCATION: (12)..(12)
94 <223> OTHER INFORMATION: Xaa at position 12 is Glycine Methyl Ester
97 <400> SEQUENCE: 5
W--> 99 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Xaa
100 1          5          10
103 <210> SEQ ID NO: 6
104 <211> LENGTH: 13
105 <212> TYPE: PRT
106 <213> ORGANISM: Artificial Sequence
108 <220> FEATURE:
109 <223> OTHER INFORMATION: Description of Artificial Sequence: This is a carboxy-ester
synt
110      hetic precursor to substance P.
112 <220> FEATURE:
113 <221> NAME/KEY: MISC_FEATURE
114 <222> LOCATION: (13)..(13)
115 <223> OTHER INFORMATION: Xaa at position 13 is Lysine Methyl Ester
118 <400> SEQUENCE: 6
W--> 120 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Xaa
121 1          5          10
124 <210> SEQ ID NO: 7
125 <211> LENGTH: 14
126 <212> TYPE: PRT
127 <213> ORGANISM: Artificial Sequence
129 <220> FEATURE:
130 <223> OTHER INFORMATION: Description of Artificial Sequence: This is a carboxy-ester
synt
131      hetic precursor to substance P.
133 <220> FEATURE:
134 <221> NAME/KEY: MISC_FEATURE
135 <222> LOCATION: (14)..(14)
136 <223> OTHER INFORMATION: Xaa at position 14 is Arginine Methyl Ester
139 <400> SEQUENCE: 7
W--> 141 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Lys Xaa
142 1          5          10
145 <210> SEQ ID NO: 8
146 <211> LENGTH: 12
147 <212> TYPE: PRT

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148 <213> ORGANISM: Artificial Sequence ✓
150 <220> FEATURE:
151 <223> OTHER INFORMATION: Description of Artificial Sequence: This is a carboxy-ester ✓
synt
152      hetic precursor to substance P.
154 <220> FEATURE:
155 <221> NAME/KEY: MISC_FEATURE
156 <222> LOCATION: (12)..(12)
157 <223> OTHER INFORMATION: Xaa at position 12 is Glycine Ethyl Ester
160 <400> SEQUENCE: 8
W--> 162 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Xaa
163 1          5          10
166 <210> SEQ ID NO: 9
167 <211> LENGTH: 13
168 <212> TYPE: PRT
169 <213> ORGANISM: Artificial Sequence ✓
171 <220> FEATURE:
172 <223> OTHER INFORMATION: Description of Artificial Sequence: This is a carboxy-ester ✓
synt
173      hetic precursor to substance P.
175 <220> FEATURE:
176 <221> NAME/KEY: MISC_FEATURE
177 <222> LOCATION: (13)..(13)
178 <223> OTHER INFORMATION: Xaa at position 13 is Lysine Ethyl Ester
181 <400> SEQUENCE: 9
W--> 183 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Xaa
184 1          5          10
187 <210> SEQ ID NO: 10
188 <211> LENGTH: 14
189 <212> TYPE: PRT
190 <213> ORGANISM: Artificial Sequence ✓
192 <220> FEATURE:
193 <223> OTHER INFORMATION: Description of Artificial Sequence: This is a carboxy-ester ✓
synt
194      hetic precursor to substance P.
196 <220> FEATURE:
197 <221> NAME/KEY: MISC_FEATURE
198 <222> LOCATION: (14)..(14)
199 <223> OTHER INFORMATION: Xaa at position 14 is Arginine Ethyl Ester
202 <400> SEQUENCE: 10
W--> 204 Arg Pro Lys Pro Gln Gln Phe Phe Gly Leu Met Gly Lys Xaa
205 1          5          10
208 <210> SEQ ID NO: 11
209 <211> LENGTH: 4
210 <212> TYPE: PRT
211 <213> ORGANISM: Unknown ✓
213 <220> FEATURE:
214 <223> OTHER INFORMATION: Description of Unknown Organism: This is a naturally
occurring am
215      ino thermal peptide fragment derived from substance P.
217 <400> SEQUENCE: 11
219 Arg Pro Lys Pro
220 1

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TIME: 13:21:39

Input Set : A:\D2875.ST25.txt

Output Set: N:\CRF3\10152001\I489667B.raw

223 <210> SEQ ID NO: 12  
 224 <211> LENGTH: 7  
 225 <212> TYPE: PRT  
 226 <213> ORGANISM: Unknown  
 228 <220> FEATURE:  
 229 <223> OTHER INFORMATION: Description of Unknown Organism: This is a naturally  
 occurring am  
 230 ino acid thermal peptide fragment derived from substance P.  
 232 <400> SEQUENCE: 12  
 234 Arg Pro Lys Pro Gln Gln Phe  
 235 1 5  
 238 <210> SEQ ID NO: 13  
 239 <211> LENGTH: 9  
 240 <212> TYPE: PRT  
 241 <213> ORGANISM: Unknown  
 243 <220> FEATURE:  
 244 <223> OTHER INFORMATION: Description of Unknown Organism: This is a naturally  
 occurring am  
 245 ino thermal peptide fragment derived from substance P.  
 247 <400> SEQUENCE: 13  
 249 Arg Pro Lys Pro Gln Gln Phe Phe Gly  
 250 1 5  
 253 <210> SEQ ID NO: 14  
 254 <211> LENGTH: 11  
 255 <212> TYPE: PRT  
 256 <213> ORGANISM: Artificial Sequence  
 258 <220> FEATURE:  
 259 <223> OTHER INFORMATION: Description of Artificial Sequence: This is an analog of  
 substan  
 260 ce P.  
 262 <220> FEATURE:  
 263 <221> NAME/KEY: MISC\_FEATURE  
 264 <222> LOCATION: (2)..(11)  
 265 <223> OTHER INFORMATION: Xaa at position 2 is D-form of Proline, Xaa at position 7 is  
 D-fo  
 266 rm of Phenylalanine, Xaa at position 9 is D-form of Tryptophan, X  
 267 aa at position 11 Methionine Amide  
 270 <400> SEQUENCE: 14  
 W--> 272 Arg Xaa Lys Pro Gln Gln Xaa Phe Xaa Leu Xaa  
 273 1 5 10  
 276 <210> SEQ ID NO: 15  
 277 <211> LENGTH: 12  
 278 <212> TYPE: PRT  
 279 <213> ORGANISM: Artificial Sequence  
 281 <220> FEATURE:  
 282 <223> OTHER INFORMATION: Description of Artificial Sequence: This is an analog of  
 substan  
 283 ce P.  
 285 <220> FEATURE:  
 286 <221> NAME/KEY: MISC\_FEATURE  
 287 <222> LOCATION: (2)..(9)  
 288 <223> OTHER INFORMATION: Xaa at positon 2 is D-form of Proline, Xaa at position 7 is  
 D-for

289 m of Phenylalanine, Xaa at position 9 is D-form of Tryptophan  
292 <400> SEQUENCE: 15

## RAW SEQUENCE LISTING

DATE: 10/15/2001

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Input Set : A:\D2875.ST25.txt

Output Set: N:\CRF3\10152001\I489667B.raw

W--> 294 Arg Xaa Lys Pro Gln Gln Xaa Phe Xaa Leu Met Gly  
 295 1 5 10  
 298 <210> SEQ ID NO: 16  
 299 <211> LENGTH: 11  
 300 <212> TYPE: PRT  
 301 <213> ORGANISM: Artificial Sequence  
 303 <220> FEATURE:  
 304 <223> OTHER INFORMATION: Description of Artificial Sequence: This is an analog of  
 substan  
 305 ce P.  
 307 <220> FEATURE:  
 308 <221> NAME/KEY: MISC\_FEATURE  
 309 <222> LOCATION: (2)..(11)  
 310 <223> OTHER INFORMATION: Xaa at position 2 is D-form of Proline, Xaa at position 7 is  
 D-fo  
 311 rm of Tryptophan, Xaa at position 9 is D-form of Tryptophan, Xaa  
 312 at position 11 is Methionine Amide  
 315 <400> SEQUENCE: 16  
 W--> 317 Arg Xaa Lys Pro Gln Gln Xaa Phe Xaa Leu Xaa  
 318 1 5 10  
 321 <210> SEQ ID NO: 17  
 322 <211> LENGTH: 12  
 323 <212> TYPE: PRT  
 324 <213> ORGANISM: Artificial Sequence  
 326 <220> FEATURE:  
 327 <223> OTHER INFORMATION: Description of Artificial Sequence: This is an analog of  
 substan  
 328 ce P.  
 330 <220> FEATURE:  
 331 <221> NAME/KEY: MISC\_FEATURE  
 332 <222> LOCATION: (2)..(9)  
 333 <223> OTHER INFORMATION: Xaa at position 2 is D-form of Proline, Xaa at position 7 is  
 D-fo  
 334 rm of Tryptophan, Xaa at position 9 is D-form of Tryptophan  
 337 <400> SEQUENCE: 17  
 W--> 339 Arg Xaa Lys Pro Gln Gln Xaa Phe Xaa Leu Met Gly  
 340 1 5 10  
 343 <210> SEQ ID NO: 18  
 344 <211> LENGTH: 11  
 345 <212> TYPE: PRT  
 346 <213> ORGANISM: Artificial Sequence  
 348 <220> FEATURE:  
 349 <223> OTHER INFORMATION: Description of Artificial Sequence: This is an analog of  
 substan  
 350 ce P.  
 352 <220> FEATURE:  
 353 <221> NAME/KEY: MISC\_FEATURE  
 354 <222> LOCATION: (11)..(11)  
 355 <223> OTHER INFORMATION: Xaa at position 11 is Methionine Amide  
 358 <400> SEQUENCE: 18  
 W--> 360 Arg Pro Cys Pro Gln Cys Phe Tyr Gly Pro Xaa  
 361 1 5 10

## VERIFICATION SUMMARY

DATE: 10/15/2001

PATENT APPLICATION: US/09/489,667B

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Input Set : A:\D2875.ST25.txt

Output Set: N:\CRF3\10152001\I489667B.raw

L:33 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:99 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:120 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:141 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:162 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
L:183 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:204 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10  
L:272 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14  
L:294 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15  
L:317 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16  
L:339 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17  
L:360 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18